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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,447	05/02/2001	Roland M. Morley	INTL-0535-US (P10840)	7740

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EXAMINER	
LEURIG, SHARLENE L	
ART UNIT	PAPER NUMBER
2879	

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/847,447	MORLEY ET AL.	
	Examiner	Art Unit	
	Sharlene Leurig	2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 October 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) *12-30* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 stands rejected under 35 U.S.C. 102(b) as being anticipated by Li (5,563,470) (of record).

Li discloses a large format display comprising a plurality of emissive display modules (Figure 1, elements 12-15), each module including at least two contact pads (44, 52, 46), which are alignment elements (column 1, lines 43-46), and a back frame (56) including a plurality of alignment devices (72, 78, 74) to mate with the alignment elements of the display modules. The contact pads can be interpreted as mating even though there is a solder joint separating them because "mate" can be interpreted as meaning "to be brought together", "together" can be interpreted as meaning "to be in contact", "contact" can be interpreted as "touching or in immediate proximity", and "proximity" can be interpreted as meaning "close together", which does not necessarily mean touching.

3. Claims 1-6 and 8 stand rejected under 35 U.S.C. 102(b) as being anticipated by Seraphim et al. (5,889,568) (of record).

Regarding claim 1, Seraphim discloses a large format display comprising a plurality of emissive display modules (Figure 13, elements 130 and 131), each module

including at least two alignment elements in the form of electrical connector lines (Figure 15, elements 160-167), which connect with electrical connectors on a back frame (Figure 13, element 155) (column 7, lines 38-42) that therefore serve as alignment devices. Since the electrical connectors must mate in order for the device to work, they are considered to be alignment elements and devices.

Regarding claim 2, the electrical connectors serving as alignment elements may be secured to a backplate ("tile carrier") to which the electroluminescent display tile is attached (column 7, lines 38-42).

Regarding claim 3, a driver chip (Figure 13, element 138) may be secured on the back surface of the display tile, which has one or more emissive elements on its front surface.

Regarding claim 4, fasteners in the form of solder pads and solder joints (Figure 4, elements 71, 82, 73) extend from the backplates (75). The solder pads (82) that are joined by the solder joints also function as alignment elements corresponding to solder pads (73) on the backframe that function as alignment devices (column 7, lines 62-64, column 8, lines 24-30). The solder pads can be interpreted as mating even though there is a solder joint separating them because "mate" can be interpreted as meaning "to be brought together", "together" can be interpreted as meaning "to be in contact", "contact" can be interpreted as "touching or in immediate proximity", and "proximity" can be interpreted as meaning "close together", which does not necessarily mean touching.

Regarding claim 5, the backframe has elements in the form of solder pads (73) that engage the fasteners in the form of solder pads (82) and solder joints (71) extending from the backplate.

Regarding claim 6, the backplate (Figure 4, element 75) removeably connects the modules (76) to the backframe (70). The solder joints can be melted and the panel disassembled (column 14, line 55).

Regarding claim 8, each module includes a transparent layer (Figure 5a, element 110) and a plurality of spaced apart light emissive cells (115) formed on the layer and defining regions in between the cells. The layer 110 must be transparent since the display is lit by a series of lights underneath it (Figure 6, element 60) and the viewing side is on the opposite side from the lights, through the layer 110.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 7 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Seraphim et al. (5,889,568) (of record) in view of Minemoto et al. (5,436,920) (of record).

Seraphim discloses fasteners in the form of solder joints removeably joining the backplate (Figure 4, element 75) to the backframe (70).

Seraphim lacks disclosure of threaded fasteners as a type of fastener.

Minemoto teaches that either screws, which are threaded fasteners, or solder joints may be used as connection parts and are therefore interchangeable.

Therefore because screws and solder were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute threaded fasteners for the solder joints of Seraphim in order to provide a more secure connection in the form of threaded fasteners and avoid the possibility of shearing on the solder joints.

6. Claims 9-11 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Seraphim et al. (5,889,568) (of record) in view of Matthies et al. (6,370,019) (of record).

Seraphim discloses a large format display with all the limitations discussed above, including gaps between adjacent modules and an adhesive that is optically matched to the glass to prevent internal reflection (column 16, lines 9-15).

Seraphim lacks disclosure of an optically absorbing material formed on the transparent layer of each module in order to overlay the regions between the cells or between the individual modules.

Regarding claim 9, Matthies teaches deposition of an optically absorbing material in the regions between cells in order to improve the image by preventing internal reflections (column 10, line 63).

Therefore regarding claim 9, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Seraphim's display with an optically absorbent material in the regions between cells in order to improve the image, as taught by Matthies.

Regarding claim 10, Matthies teaches in Figure 8, element 802, a bead seal along the periphery of each module between adjacent modules. The optically absorbing masking layer (Figure 8, element 804) covers the bead seals that lie on the peripheral gaps between adjacent modules so when the tiled display is viewed from the top, no seal is seen.

Therefore regarding claim 10, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Seraphim's display with an optically absorbent material in the gaps between adjacent modules in order to improve the image, as taught by Matthies.

Regarding claim 11, Seraphim discloses an optically clear adhesive between adjacent modules (Figure 13, element 153). The adhesive's refractive index is matched to the glass, which is clear, which also means the adhesive is clear (column 16, lines 10-15).

Response to Arguments

7. Applicant's arguments filed on October 27, 2003 have been fully considered but they are not persuasive. The applicant argues that the claims are allowable over the applied references because the electrical contacts do not themselves act as alignment

elements, because although they "allow the user a target to try to align one element with the other element," they "do not themselves function as alignment elements -- i.e., elements that serve to align." The applicant further argues that "the alignment is only the result of action by the user."

The examiner maintains that the references of the prior art of record do teach electrical contacts that function as alignment elements and alignment devices, since their proper alignment is necessary for the functioning of the display devices.

Furthermore, it is unclear to the examiner how the claimed alignment elements can be used to align without the guidance of a user, as the claimed alignment elements do not seem to be able to spontaneously align without user guidance.

Therefore the rejection of record is maintained by the examiner and made final.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharlene Leurig whose telephone number is (703)305-4745. The examiner can normally be reached on Monday through Friday, 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703)305-4794. The fax phone number for the organization where this application or proceeding is assigned is (703)308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Sharlene Leurig

NIMESH KUMAR D. PATEL
SUPERVISORY PATENT EXAMINER
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